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ABSTRACT

This article addresses a research direction in which language professionals' research efforts can be invested to clarify the conceptual framework of the foreign language (FL) anxiety construct and develop an alternative measure to the construct. Current research on the effects of FL anxiety on learner performance has yielded inconsistent research findings. This paper examines three models of FL anxiety: the socio-educational model, the cognitive processing model, and the foreign language classroom anxiety model. It is argued that given the inherent limitations of each model, contradictory findings are in part attributable to the unsound conceptual framework of the construct. This article proposes a conceptual framework within which a measure of the construct sensitive enough to tap anxiety specific to a foreign language classroom setting may ensue, followed by the delineation of future research areas. (Contains 84 references.) (Author/KFT)

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Foreign Language Anxiety as an Individual Difference Variable in Performance: From an Interactionist's Perspective

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Abstract

This article addresses a research direction in which language professionals' research efforts can be invested to clarify the conceptual framework of the foreign language (FL) anxiety construct and develop an alternative measure to the construct. Current research studies on the effects of FL anxiety on learner performance are still characterized by inconsistent research findings. The degree of inconsistency shown in the research studies varies from perspective to perspective. Three models of FL anxiety are scrutinized from the perspective of the conceptualization and measurement of the construct: socio-educational model; cognitive processing model; FL classroom anxiety model. It is argued that given the limitations each model inherently reveals, contradictory findings are in part attributable to the unsound conceptual framework of the construct and resultant issues related to the existing measures. Specifically, this article proposes a conceptual framework within which a measure of the construct sensitive enough to tap anxiety specific to an FL classroom setting may ensue, followed by the delineation of future research areas.

Foreign Language Anxiety as an Individual Difference Variable in Performance: From an Interactionist's Perspective

In a series of works, Chomsky (1959, 1968, 1975) challenged Skinnerian theory which is rooted in behaviorism, when applied to language learning. His notion on language has evoked enormous repercussions in the field of language education. Another impact on the language teaching profession came from Rivers (1964) who also challenged behaviorist theories on the grounds that they ignored cognitive aspects of the human learning process. These two scholars' linguistic and psychological perspectives led to a change in the frame of mind among many applied language researchers. In addition to a cognition-based perspective on the language learning proposed by Chomsky and Rivers, advances in brain science in the 1980s provided another impetus for language professionals. This added dimension to language researchers' perspective dates back to the brain scientists' recognition that the cognition-based research tradition offers only a partial account of how the human mind operates, resulting in the overlooking of the emotional facet of learning (Young, 1999).[1]

Influenced by the interdisciplinary work in the fields of linguistics, psychology, and brain science, many language-learning researchers have invested their attention to domains of inquiry that look into learner variables both theoretically and practically to answer the following questions: (a) why is there individual variation in second or foreign language learning?; (b) how can we explain the variation among individual language learners?; (c) what are remedies or interventions effective for helping learners with difficulty in the process of language learning?[2]

Over the past several decades, language professionals have been entertaining discourses which investigate learner variables, specifically affective variables, in second language (L2) and foreign language (FL) learning and the effects of affective variables on language learning. Recognition of the significance and impact of affective variables on language learning has generated numerous research studies on the topics of the motivation and anxiety of language learners

(Clément, Dörnyei, & Noels, 1994; Dörnyei, 1994a, 1994b; Gardner, 1985; Horwitz, Horwitz, & Cope, 1986; Horwitz & Young, 1991; and etc.). The following discussion focuses on the construct of anxiety which is assumed to be emotional.[3] Of the two constructs germane to language learning, motivation and language anxiety, the former has subsumed the latter in research studies until the mid 80s before Horwitz et al.'s hallmark paper appeared in The Modern Language Journal. The construct of language anxiety has been regarded as periphery or a subcomponent of the motivation construct in language learning. This was particularly so in Gardner's and Gardner and his associates' research studies on second-language learning motivation within the framework of social psychology (Clément, Gardner, & Smythe, 1980; Clément & Kruidenier, 1985; Gardner, 1983; Gardner, 1985).[4] Dichotomous perspectives on anxiety (i.e., state vs. trait), imported from psychology, have impacted on anxiety research in the field of language learning throughout the mid 80s. Little research was conducted on the conceptualization of the construct of second language anxiety or foreign language anxiety (for one exception, see Horwitz et al.). In their study, Horwitz et al. conceptualized foreign language anxiety from the perspective of situation specific anxiety. However, the research into the relationship between foreign language anxiety and FL learning has so far yielded inconsistent and frequently conflicting results (Backman, 1976; Chastin, 1975; Tucker, Hamayan, & Genesee, 1976; Ganschow, Sparks, Anderson, Javorshy, Skinner, & Patton, 1994, to name only some of the studies). Some researchers simply stated that such inconsistencies in research reports suggest that language anxiety is a complex, multidimensional psychological construct (Scovel, 1978; Young, 1986). Nevertheless, the field has made important advances in terms of research into the role of language anxiety in learners and into the methods for its treatment.

In this paper, I argue that contradictory research findings are in part attributable to the unsound conceptual framework of the construct and resultant issues related to the existing measures.[5] The organization of the paper is as follows: First, psychological perspectives on anxiety will be delineated, followed by their application to language anxiety research. Second, how the

construct of language anxiety is theoretically represented will be examined in terms of the three models: (a) socio-educational model; (b) cognitive processing model; (c) Horwitz et al.'s foreign language anxiety model. As a prelude to a reconceptualization of foreign language anxiety, the limitations of each model will be presented. Particularly, placing the existing conceptualization and its measure of FL anxiety under scrutiny will serve as a basis for formulating a theoretical framework and for constructing an alternative measure of FL anxiety. Third, a conceptual framework of FL anxiety will be offered from the perspective of an emotion-cognition interaction. Finally, future research areas will be outlined that are germane to FL anxiety.

Perspectives on the construct of general anxiety and research on foreign language anxiety

According to Levitt (1980), it is hardly possible to contest that anxiety or apprehension is a "pervasive psychological phenomenon" (p. 1) in modern society. Anxiety is a psychological construct or entity. We cannot see it with the naked eye or even with the aid of microscope, because it is an abstract entity without physical properties in its existence. It is a hypothetical construct which has turned out to be useful in the account of an individual's propensity to experience fear or apprehension, based on its manifestations.

Anxiety is one of the topics that has captured language-learning researchers' attention since they attempted to explain individual differences in language learning. By adopting the construct of language anxiety from psychology, researchers assume that language anxiety or foreign language anxiety exists and that it has a detrimental impact on language learning and performance (Horwitz & Young, 1991). The assumption also follows from a variety of studies based on learners' diaries, learner observations, and interviews with language specialists as well as learners (Bailey, 1983; Horwitz et al., 1986; Price, 1991; Young, 1990, 1992). All this research points to the pervasiveness of language anxiety on learning. Some students who have no anxiety at all in other classes experience anxiety in a language class.[6] This is the very basis from which language researchers make a conceptual distinction between language anxiety and other types of anxiety identified by the

psychologists.[7]

Psychologists categorize anxiety as trait, state, and situation-specific anxiety. A synopsis of each of the perspectives will be conducive to a clearer understanding of the construct of foreign language anxiety. Furthermore, it will not be futile to examine foreign language anxiety within the context of general anxiety research in psychology (Endler, 1980), not only because some L2/FL anxiety researchers have accepted the assumption that L2/FL anxiety is a subset of general anxiety, but also because the research findings of some of their probes into the role of language anxiety in learning may have been reflexes of the discrepancies in the conceptualization of the construct of anxiety (MacIntyre & Gardner, 1991a).

The dichotomy of trait anxiety and state anxiety was introduced by Cattell and Scheier (1960) and was widely used in the classical anxiety model. According to Spielberger (1975), trait anxiety is based on the assumption that there is a relatively stable predisposition of an individual to exhibit anxious feelings in every situation, whereas state anxiety is referred to as apprehension with a temporal reference point, i.e., apprehension a person develops at a given moment. Whether the point of reference is considered or not makes state anxiety distinct from trait anxiety. Research from the third perspective, situation specific anxiety, focuses on the measurement of anxiety developing consistently over time in a particular type of situation or context only.

More specifically, today's psychologists perceive trait anxiety and state anxiety as totally distinct, though they are related to each other. There are two views of trait anxiety: unidimensional and multidimensional. First, following Spielberger's (1975) definition, trait anxiety is viewed as "a single, unitary characteristic of the organism that is based primarily in past experience, and like other personality traits, is firmly established in adulthood" (Levitt, 1980, p. 14). This view reflects the approach to anxiety as an individual's general personality trait, the measure of which purports to predict a person's propensity to be anxious across situations. When following this view, we can easily see that its primary focus is on the predisposition within the person (i.e., on intrapsychic properties), not on the situations (Levitt). The personality trait viewpoint conceives anxiety to be the

sum of situations and to be applicable across circumstances. The second view of anxiety as a multidimensional trait derives from the criticism of the unidimensional view of a general personality trait. That is, in the first view, the individual is the primary and the situations are the secondary. Situation theorists (or social-learning theorists) like Mischel (1968) have challenged the unitary view that follows the principle of c npositionality. The opposing viewpoint is two-fold: (a) the situation must be accorded the most prominent place in determining an individual's predispositions at any moment; (b) given the rare specification of the situations in the measures of a unitary personality trait, the trait tests cannot be valid ones in predicting the disposition of a person to develop anxiety in a given situation with consistency and accuracy. Endler (1980) and Mischel and Peake (1982) take a moderate stance between the extremes. Endler proposes a person-situation interaction model of anxiety. He argued that if personality traits are not taken into account within the confines of a situation, they are not significant at all. The situation within which an individual develops anxiety must be considered to be at least as meaningful as the individual's traits, if not paramount.

State anxiety is conceptualized as different from trait anxiety and situation specific anxiety. It is characterized by an individual's momentary state of feeling apprehensive or nervous that alternates over time to a varying degree. State anxiety is not conceptualized as referring to the person's likelihood of feeling anxious in a specific circumstance, unlike the way trait anxiety and situation specific anxiety are. Levitt (1980) summarized state anxiety as having the following multimodal response modes, based on the consensus among theorists. Researchers depend on some of the modes for the definition of state anxiety in their studies.

1. A verbal report, spoken or written, that conveys via ordinary language the message that the reporter is consciously experiencing fear;
2. Minor surface physical reactions such as pallor, sweating, or trembling, which are ordinarily manifest;
3. Internal physiological reactions such as elevated blood pressure and pulse

rate, breathing, hormonal and gastrointestinal changes, and loss of consciousness;

4. Voluntary gross motor behavior or absence of behavior ("freezing"), most often taking the form of withdrawal from, or avoidance of, a situational threat (p. 12).

A serious issue arises as to the source of anxiety reaction, when the state anxiety measure is administered. Because the instrument does not ask the respondent to ascribe the anxious reaction to a certain source, the source of anxiety experience via self-report is hard to locate, unlike situation specific anxiety measures. That is, the most serious drawback of the state anxiety measure is that the measured scores may render an assortment of source variables almost impossible, due to possible interventions of numerous factors in state anxiety reaction at the time of answering an instrument item (Levitt).

The perspective that a specific situation has primacy over person represents the third approach to anxiety. As noted above, situation specific anxiety is conceptualized as applied to a specific circumstance, not across various situations. The level of anxiety a person feels varies from situation to situation. Thus, one may feel anxiety in a Situation A, but not in Situations B, C, D, and so on. A measure of situation specific anxiety can be perceived to be a trait anxiety measure confined to a specific situation (MacIntyre & Gardner, 1991a). The situation specific approach has an advantage over state anxiety perspective. The measure of the situation specific construct can be used to cope with the difficulty of identifying the sources of feeling anxious in the use of state measures.[8] In the conceptualization of the situation specific construct, a crucial thing to be considered is the extent to which a situation is specified.

Prior to Horwitz et al. (1986), quite a few researchers were involved in research into a conceptual clarification of the construct of language anxiety per se distinct from general anxiety. Almost all researchers conducted their research studies with the exclusive use of one of the dichotomous perspectives of general anxiety. Such practices definitely laid quite an instable theoretical foundation on which subsequent research on FL anxiety has been built. For example,

Brown (1973) and Scovel (1978) already addressed this issue coupled with several ambiguities arising from foreign language anxiety research in the literature reviews. Scovel offered a model in terms of Buddhist philosophy, citing Hilgard, Atkinson, and Atkinson's (1971) definition of anxiety as "a state of apprehension, a vague fear. . . " (p. 134).[9] But, the model gained no visible support from researchers.

Some of language research will be examined on the effects of anxiety on learning from the three perspectives.[10] Swain and Burnaby (1976) examined the relationship between trait anxiety and second language learning. When young children in a French immersion class were compared with their counterparts in a regular language program in Kindergarten and grades 1-2, their research revealed a lack of differences between language anxiety and other measures of proficiency, except for a relationship with a reading test. However, Bartz (1974) found a correlation only between trait anxiety and high school German students' writing performance. Prior to Swain and Burnaby's and Bartz' research studies, Brewster (1971) conducted the research from learners of various languages at the Defense Language Institute. From these studies, it may be inferred that inconsistent results follow from intervening factors such as age, different target languages, and focus on different skills.

Research studies on the relationship between state anxiety and language learning have also been carried out, yielding conflicting results. Chastain (1975) showed an inverse correlation between test anxiety and university students' final course grades in an audio-lingual French class and no correlations in regular French or German classes. But he found some contradictory results in German and Spanish classes: a positive correlation between anxiety and the scores of German and Spanish students in traditional classes. Further complexities were the positive correlation between test anxiety and Spanish learners' grades and no relationship between all course grades and Manifest anxiety. From these results, Chastain suggested that some anxiety enhances performance, while too much anxiety impedes language learning. Chastain's point of view led to Kleinmann's (1977) research that used Alpert and Haber's (1960) distinction between facilitating

anxiety and debilitating anxiety. Kleinmann was interested in testing two hypotheses: (1) FL students would avoid the English syntactic structures divergent from their native language structures; (2) facilitating anxiety would influence FL learners's use of the English syntactic structures that their native language peers would most likely avoid because of divergence from their native language syntax. Kleinmann's research showed that Spanish and Arabic university students who scored high on facilitating anxiety measures tended to employ difficult English structures frequently.[11] Debilitating anxiety as a detriment to language learning was found not to be negatively related to performance. In a study of 60 university-level majors of French, German, and Spanish in Texas, Young (1986) examined the relationship between state anxiety and oral performance. Young's research revealed a significant negative correlation between anxiety and oral proficiency interview (OPI) scores. However, such a correlation was no longer significant when the variable of ability was controlled, which led Young to a conclusion that ability has a more impact on oral proficiency than does anxiety.

Research on the relationship of situation specific anxiety to language performance is voluminous. However, mixed and confusing results have been reported as well. Backman's (1976) study found that the two English-learning Spanish subjects with the lowest ability had the lowest and highest scores on the measure of anxiety. Backman interpreted this result as meaning that there is no nexus between anxiety and performance. In the same year, Tucker, Hamayan, and Genesee found that their junior-high school subjects' anxiety scores had a significant negative correlation with reading performance, but not with oral performance. However, in a study involving intermediate French learners at a university, Phillips (1992) examined the effects of anxiety on oral exam performance. She found that the learners' anxiety scores had a negative correlation with their oral exam grades ($r = -.40$, $p < .01$).[12] This moderate correlation led her to suggest that more anxious FL learners tend to get lower exam grades than their less anxious peers. Research from the situation specific perspective has generally yielded consistent results since the Horwitz et al.'s

(1986) study. Yet, some of the research showed contrasting results. For example, in her test of Horwitz et al's construct of foreign language anxiety, Aida (1994) found that some items on the Foreign Language Classroom Anxiety Scale (FLCAS) did not load any one factor.[13] She suggested that items reflective of test anxiety be eliminated from the FLCAS. Her suggestion was congruent with the results of MacIntyre and Gardner (1989) who found that test anxiety did not contribute to the communicative anxiety of the foreign language classroom. Specifically, MacIntyre and Gardner stated that test anxiety is not an issue specific to the language classroom but a general one.

Finally, I find it worthwhile to consider a radically different approach to language anxiety and learning. Such an approach is found mainly in the research studies by Sparks and Ganschow (1991, 1993a, 1993b). The authors attribute difficulty or failure in FL learning to a poor command of the linguistic code in one's native language. In the account of individual differences in language learning, they proposed the Linguistic Coding Deficit Hypothesis (LCDH). That is, the LCDH is "an alternative to affective explanation for FL learning problems" (1993b, p. 289). Their proposal derives from the assumption that the extent to which FL learners have command of the phonological, syntactic, and semantic components of the linguistic code enhances or curbs FL learning. The authors deny the admissibility of the construct of FL anxiety to its relationship with students' performance, on the grounds that "language anxiety does not add much to our understanding" of the language learning process (MacIntyre, 1999, p. 24). Sparks and Ganschow's perspective also implies that in explaining individual differences in learner performance, they resort to cognitive variables, but not to affective variables.

In summary, we have seen that the degree of inconsistency shown in a variety of research studies varies from perspective to perspective. The first perspective regards anxiety as a general personality trait with an individual's being likely to become anxious in every situation. This trait perspective with its overemphasis on intrapsychic properties particularly gave rise to the most confusing results. The second viewpoint examines anxiety as the apprehension an individual

experiences at a specific moment in time, for example, before taking an examination. The third situation specific approach aims to measure anxiety developing consistently in a particular situation.

Language learning models and the construct of language anxiety

Several models of second language learning deal with the construct of language anxiety. Among these models are Gardner's socio-educational model, MacIntyre and Gardner's processing model, and Horwitz et al.'s foreign language classroom anxiety model. While the first model deals with the construct of language anxiety as a subcomponent of a larger construct, the other two focus on the construct of language anxiety per se. Each model differs in the degree to which they attach the importance of the construct in question to the explanation of the individual differences in the L2/FL learning process. Such differences, I find, have contributed to possible sources of confusion in both conceptualization and measure of the construct. Of course, granting that each model has its own advantages and provides insights into the account of the language learning process, I do not deny the perspective taken in terms of the weight the respective model gives to the construct of language anxiety in association with the researcher(s)' interest at hand. However, I find that one is entitled to entertain the possibility of either the limitations of the models that directly bear on an understanding of the issue of individual differences in L2/FL learning or a theory (or model) to be offered that will, in the long run, reflect L2/FL learning process accurately. This can be done not only by incorporating the advantages and insights each model offers, but also by overcoming the limitations.

As a first step, I will place the three models under scrutiny, limiting current discussion to the examination of the construct of language anxiety within each model.

Socio-educational model

Gardner's (1985) socio-educational model which is rooted in Lambert's social psychological model has been a result of many revisions over several years since its inception. With regard to the construct of language anxiety, Gardner himself was indecisive in including the construct of language anxiety in his model (see Gardner, 1985 for other versions of the model).[14]

The 1985 model included the construct of anxiety as one of the components under individual difference variables that he assumes affect the L2 learning process. Contrary to Gardner's early research, his later research in collaboration with others addressed the effects of language anxiety on language learning by including the construct in the socio-educational model (Clément, 1980; Gardner, Lalonde, & Pierson, 1983; Gardner & Lysynchuk, 1990; Lalonde & Gardner, 1984). Given that his major focus was on attitudes and motivation within the model, he provided little rationale for overlooking or disregarding of the role of language anxiety in the account of individual differences in achievement within his own framework. This would not be warranted.[15] This criticism holds true for reducing the predictive power of the models. But, Gardner, in overviewing his model which he finds to be superior to other models, he claims that: ". . . and theoretical formulations must be more precise and predictive if they are to be of use in formulating plans to improve second language learning" (1985, p. 146). It might be fair to say that Gardner's socio-educational model is a passive model at least as far as the role of language anxiety in the language learning process is concerned.

More importantly, the socio-educational model has some drawbacks inherent in it.

Such weaknesses mostly stem from the emphasis the model places on a broad perspective, i.e., what is called a bird's-eye view. This makes it hard to have a better understanding of what happens in the classroom language learning setting, even though the model claims the importance of social context. In Gardner's (1985) model, the social context influences language learning at three levels: (a) the cultural beliefs which determine attitudes; (b) the attitudes toward the context in which learning takes place; (c) the formality and informality of language learning situations. In the model, the formal nature of the learning situation is defined. Yet, the definition is still associated with the social milieu. Formal learning situations which are inadequately and broadly defined pose problems in association with the interaction between the learning situation and psychological constructs (Clément & Kruidenier, 1985). More specifically, this point holds true for the interface between formal learning contexts and situational anxiety. Since in Gardner's model, formal learning

situations (i.e., language classroom) are still defined in terms of the larger scope of social milieu, the effects of an individual learner's anxiety specific to a language classroom setting are blurred. Thus, the model makes it almost impossible to elucidate the role of situation specific anxiety in the explanation of individual differences in language performance.

As a corollary of the criticism mentioned, the socio-educational model meets with an issue of generalizability. That is, the fact that the model is constructed on the larger social milieu rather than on the confines of much more restricted formal classrooms is subject to the criticism that the model is not sufficiently generalizable.[16]

As shown in the previous section, Gardner's model is also silent on conceptualizing the language anxiety construct, except for defining language anxiety as "related to second language achievement" (Gardner, 1985, p. 34). The researchers working within this model have argued that language anxiety is one of the best determinants of language proficiency (Gardner, 1985; Gardner, Smythe, Clément, & Gliksman, 1976; MacIntyre & Gardner, 1991a) or one of the four higher order constructs, along with integrativeness, attitudes toward the learning situation, and motivation (Gardner & MacIntyre, 1993). However, it may be that the absence of a sound conceptual framework did not help place in the model the situational anxiety construct.[17]

Though Gardner's model has the situational anxiety construct as one of the four variables under individual difference category, the situational anxiety construct in the model offers no specifics on the aspects of cognition and/or emotion, or even the interaction of emotion and cognition, in relation to language learning. This criticism is of particular importance in that language learning involves cognitively demanding processes and that a language learning situation could most likely accompany an emotional arousal which could deter a learner's performance.

Most importantly, the situational anxiety construct of the model is underrepresented in terms of measurement. Most studies within this framework used the "French Class Anxiety (FCA)" scale consisting of 5 items from the Attitude/Motivation Test Battery (AMTB) Gardner

and his associates developed. These 5 items for the measure of a situational specific anxiety covered some speaking-related skills only. I doubt that the FCA represents the domain of the construct to be measured, since "short tests tend to be unreliable both in terms of internal consistency and stability" (Gardner, 1988, p. 122). Obviously, the-less-the-better principle of economy needs to be cautiously applied to the construction of test items. Thus, the content-validity of the FCA is highly questionable in terms of an issue of construct underrepresentation. In the presence of the aforementioned problem, I find it unnecessary to further discuss issues on the validity of the measure of FCA.[18]

Cognitive processing model

Aside from the work of Horwitz et al. (1986), very few advances have been made in the conceptual work of the language anxiety construct, since Scovel (1978) underscored the importance of a conceptual clarification of language anxiety before documenting its impact on learner performance. Empirical research has been predominant with focus on the effects of foreign language anxiety on overt learner production. A few researchers took a different path with a view to tapping the subtle effects of language anxiety arousal at different stages on specific learning tasks (Horwitz et al.). Among these studies are Gardner, Day, and MacIntyre (1992), MacIntyre and Gardner (1989, 1991b, 1994a, 1994b), and Steinberg and Horwitz (1986). All this research reflects the recognition of how the human mind (cognition) works as analogous to the way a computer works to process information. Further prompted by the theory of information processing and cognitive psychology, the researchers above shifted their perspective from output-orientation to process-orientation (i.e., input, processing, and output) in the description of the effects of anxiety on L2/FL learning.

Research studies within this framework are usually conducted to examine the effects of induced language anxiety at three different stages of input, processing, and output in a rather artificial context. In one study Steinberg and Horwitz (1986) induced Spanish-speaking ESL learners' anxiety by videotaping them and treating them coldly, while learners were interpreting

ambiguous scenes. Their study showed that in comparing the anxiety-induced learners with those who were treated in a warm manner and who were not videotaped, learners in the anxiety-induced setting were less interpretive in the comments of ambiguous scenes.

In a series of laboratory-based studies (Gardner, Day, & MacIntyre,1992; MacIntyre & Gardner, 1989, 1991b, 1994a, 1994b), Tobias' model was applied to measure the levels of state anxiety induced at three stages of information processing. Tobias (1986) postulates that the effects of anxiety on learning can be captured at arbitrarily defined stages. These stages are input, processing, and output. He further postulated that learning at each stage is interdependent. That is, learning at subsequent stages presupposes the successful realization of the prior stage. Tobias views anxiety as intrusive self-related cognition or thinking that interferes with one's capacity to process information of a given task at each of these stages. All the research (Gardner, Day, & MacIntyre,1992; MacIntyre & Gardner, 1989, 1991b, 1994a, 1994b) took advantage of the anxiety arousal method to investigate the effects of anxiety on cognitive processing at three stages in controlled environments. The most recent study by MacIntyre and Gardner (1994a) reported that performance at each stage of learning showed a significant reduction for the groups exposed to a video camera. MacIntyre and Gardner (1994b) state that "performance measures that examine only behavior at the Output stage may be neglecting the influence of anxiety at earlier stages as well as ignoring the links among stages" (p. 301).

However, the process model has the following limitations inherent in it.

(1) The claim that the model enables us to capture one specific aspect of a phenomenon from the perspective of a three-stage cognitive processing offers no insight into a human behavior when interacting with a given environment. The very nature of the model is insensitive to contexts and does not allow for the inclusion of any situational factors or another perspectives in cognitive processing. Even the construct of language anxiety which is affective (emotional) cannot be viewed as such in the process model. The overemphasis of cognitive processing on the approach to language anxiety is more likely to result in the descriptions of an elephant by the three blind men.

The process model only explains a part of how language anxiety affects an individual learner's performance. In this respect, the process model appears to be the opposite of the aforementioned socio-educational model.

(2) As pointed out by Boekaerts (1987), research studies in the cognitive traditions are not generalizable. Research results in the process model are usually obtained from laboratory-based settings discrete from the authentic situations such a real FL classroom. Thus the results cannot be generalized across situations.

(3) More importantly, an ethical issue arises as to the method of data collection in studies using the process model. In the research noted above, for example, Steinberg and Horwitz (1986) treated their subjects in the experimental group in a cold manner while videotaping them, as ways to arouse anxiety at a specific stage. I find that no matter what the purpose of the research is, research practices involving such methods of data collection deserve to be highly criticized from an ethical perspective.

Horwitz, Horwitz, and Cope's foreign language anxiety model

Research findings on foreign language anxiety have shown that a significant number of students develop a substantial amount of anxiety in their foreign language classroom (Aida, 1994; Bailey, Onwuegbuzie, & Daley, 1998; Horwitz et al., 1986). Horwitz et al. found that among the Spanish learning students surveyed at university levels, over a third of them endorsed the statement (item 26) in Foreign Language Classroom Anxiety Scale (FLCAS), "I feel more tense and nervous in my language class than in my other classes." This may imply that FL classes can provoke more anxiety than do any other content courses and that FL anxiety can have a far-reaching impact on classroom language learners, with the possibility of its functioning as an affective filter to impede the successful mastery of a target language (Aida; Krashen, 1982).

As stated above, research on anxiety has mainly reflected the traditions with focus on the delineation of two perspectives on which anxiety research was based: trait anxiety and state anxiety. Although these two approaches contributed to the conceptualization of the language anxiety

construct and its role in language learning process to some extent, they might not be candidates most suitable for the account of the anxious feelings FL learners experience in classroom learning environments. Furthermore, research on FL anxiety has been relegated to the periphery of studies concerning other affective variables such as motivation and attitudes, thus reducing FL anxiety to a latent variable rather than a variable (Gardner, 1983, 1885; Gardner & Lysynchuk, 1990).

Research in this tradition failed to come up with any agreed upon conceptual framework within which a unified view of the construct of FL anxiety can be taken, because research literature on FL anxiety brought forth mixed and confusing results. Given this limitation, some researchers shifted their attention from the conventional dual perspectives on anxiety to a third perspective from which FL anxiety is deemed a situation specific construct (e.g., Horwitz et al., 1986). Horwitz et al.'s recognition of FL anxiety as a conceptually distinct variable in FL learning was married to the limitations of the situational anxiety measures available, specifically within Gardner's socio-educational model of second language acquisition, giving rise to the Foreign Language Classroom Anxiety Scale (FLCAS).

In the strict sense of the meaning, the way Horwitz et al. perceived language anxiety in relation to the uniqueness of the FL learning process marked a first step not only for the identification of the construct of FL anxiety, but also for probing its possible effects on learner performance from a different angle, leading to numerous studies which definitely owed much to them. Preceded by an account of Horwitz et al.'s measure of FL anxiety reflecting their model, the FLCAS will be scrutinized in terms of test validation (Messick, 1989, 1995) in order to see if the instrument fits into the intended measurement of FL anxiety in classroom settings.

Foreign Language Classroom Anxiety Scale (FLCAS)

Horwitz et al.(1986) defined the construct of foreign language anxiety as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to the classroom language learning arising from the uniqueness of the language learning process" (p. 128). Its measure, the Foreign Language Classroom Anxiety Scale (FLCAS) is a self-report and forced choice instrument

designed to tap anxiety specific to a FL classroom setting. The FLCAS, with a 33-item questionnaire, consists of anxiety statements on how anxious FL learners feel in the classroom (e.g., item 1: "I never feel quite sure of myself when I am speaking in my foreign language class"; item 20: "I can feel my heart pounding when I am going to be called on in language class"). The FLCAS employs a Likert scale score with five possible responses, ranging from "strongly agree" to "strongly disagree."

Horwitz et al. (1986) perceived speaking and listening to be the major sources of FL anxiety in language classrooms and based the content of the FLCAS on these skills. Their observation on FL learner problems with poor retrieval of items from memory, overstudying, avoidance of the situation, and fear of making mistakes under stressful conditions was also reflected in the FLCAS. Horwitz et al. classified FL anxiety into the three components (more exactly, three primary sources of FL anxiety reflected in the scale : (a) communication apprehension; (b) test anxiety; and (c) fear of negative evaluation.

In the study Horwitz (1986) conducted, anxiety scores ranged from 45 to 147 in one sample of 108 subjects, each of whose anxiety score was derived from summing his or her ratings of the 33 items ($M = 94.5$, $Mdn = 95$, $SD = 21.4$). Additionally, responses to all FLCAS items based on the percentages referring to the number of students who selected "strongly agree or agree" (or "strongly disagree or disagree") alternative show that a majority of the statements reflective of FL anxiety (19 of 33 items) were supported by a third or more of the students surveyed, and that seven statements were supported by over half the students. Some of these items are as follows: "I feel more tense and nervous in my language class than in my other classes" (item 26, 38%); "I get nervous and confused when I am speaking in my language class." (item 27, 33%); "I worry about the consequences of failing my foreign language class" (item 10, 42%); "I never feel quite sure of myself when I am speaking in my foreign language class" (item 1, 62%).

Horwitz et al. (1986) also report that the FLCAS has been administered to approximately 300 foreign language learners at the college level and has been demonstrated to be both reliable and

valid. Internal consistency for the FLCAS is .93 using Cronbach's alpha coefficient. Test-retest reliability over 8 weeks revealed an $r = .83$ ($p < .001$) in a sample of 78 subjects. Construct validity of this scale was established by the significant correlations with Spielberger's (1983) Trait Scale of the State-Trait Anxiety Inventory ($r = .29$, $n = 108$), McCroskey's (1970) Personal Report of Communication Apprehension ($r = .28$, $n = 44$), Watson and Friend's (1969) Fear of Negative Evaluation Scale ($r = .36$, $n = 56$), and Sarason's (1978) Test Anxiety Scale ($r = .53$, $n = 60$). The construct validity of the FLCAS based on correlation with other types of anxiety suggests that the FLCAS measures a distinct construct compared to measures of other types of anxiety. As for criterion-related validity, studies using the FLCAS show that the predictive validity coefficient for final grade ranges from $r = -.49$ (for two beginning Spanish classes) to $r = -.54$ (for two beginning French classes), meaning that higher levels of anxiety as measured by the FLCAS are correlated with lower final grades.

However, whether the interpretation made by Horwitz et al. (1986) is trustworthy, valid, and accurate deserves scrutiny. For this purpose, I will use Messick's (1989, 1995) test validation framework. In his framework, construct validity is a unified concept of validity subsuming not only the traditional trichotomy of validity such as content validity, criterion-related validity, and construct validity, but the social consequence of test interpretation and use which were skirted or downplayed in the traditional formulations of validity. The linchpin of the unified perspective of validity is that "the appropriateness, meaningfulness, and usefulness of score-based inferences are inseparable and that the unifying force behind this integration is trustworthiness of empirically grounded score interpretation" (p. 5). Messick enumerates two major threats to construct validity in educational and psychological measurement: construct underrepresentation and construct irrelevancy. In this respect, he emphasizes that in measurement processes, caution should be taken to eschew these two threats. Construct validity also subsumes content representativeness and content relevance. Construct validity consists of the evidence and theoretical rationales supportive of the adequacy and trustworthiness of interpretation of test scores. In short, Messick sees that all validation is construct

validation in the sense that all validity evidence contributes to or undermines the empirical grounding, appropriateness or trustworthiness of score interpretation within a unified concept of construct validity. However, Messick adds that seeing validity as a unified concept does not imply that validity cannot be separated into aspects to underscore issues that might otherwise be overlooked within the traditional trichotomy of validity.

(1) In terms of content-related validity of the FLCAS, little has been reported on the way the 33 items in the FLCAS were written out of how many FL anxiety items which the developers had initially considered possible. Specifically, there is no indication of the procedure the authors followed in the categorization of FL anxiety into the three components. I find it essential that the developers should have reported on the rationale for the establishment of such categories of the instrument on an empirical basis, not just on a conceptual basis. If they had done so, the trustworthiness and content validity of the interpretation made in Horwitz et al. could have increased with the content coverage of the relevant items representative of the domain of the construct. However, the authors of the FLCAS did not include any items related to reading and writing skills in the measure of FL anxiety in classroom settings. I find it essential to specify and include items associated with other language tasks or performance domains about which inferences are to be drawn or predictions made by exhibiting a comprehensive coverage of the construct. A lack of content representativeness shown in the FLCAS is not just related to an issue of construct underrepresentation, but also to an issue of generalizability based on the interpretation of anxiety scores. For example, an individual FL learner's anxiety score cannot be used to draw the inference or make the interpretation on the learner's being anxious in other language tasks other than the ones specified in the FLCAS. The learner's high anxiety score using the FLCAS only tells us that he or she experiences anxiety on the current domain of the FLCAS. Therefore, there is no basis for interpreting a high or low anxiety score as reflective of anxiety level in and across FL classrooms, when the FLCAS status quo is administered to classroom FL learners.

(2) With respect to an issue of construct irrelevancy of the FLCAS, a piece of evidence is found

in Aida (1994). In an experimental research study with 96 beginning-level American college students learning Japanese, she examined Horwitz et al.'s construct of foreign language anxiety through factor analysis. One of Aida's findings is that six items in the FLCAS did not load any one factor (items 2, 6, 15, 19, 28, and 30), although 4 factors were specified: Factor 1(Speech anxiety and fear of negative evaluation/18 items, accounting for 37.9% of the variance), Factor 2 (Fear of failing the class/4 items, accounting for 6.3% of the variance), Factor 3 (Comfortableness with native speaker/3 items, accounting for 5.6% of the variance), and Factor 4 (Negative attitudes toward the foreign language class/2 items, accounting for 4.7% of the variance). Of items which did not load any one factor, Aida suggested that items concerning test anxiety be deleted from the FLCAS. Likewise, MacIntyre and Gardner's (1989) earlier study also found that test anxiety did not contribute to the communicative anxiety of FL classroom. This relates to an issue of construct-irrelevancy of some items in the FLCAS. Notice that Aida's research also poses a problem. She did not clarify why her research needed four factors to test Horwitz et al.'s three component instrument. This kind of conflicting result on the FLCAS deserves investigation. One possibility is that the authors of the FLCAS do not seem to have any theoretical rationale for the bases of the three components.

(3) Given that the results based on the administration of the FLCAS have so far been obtained from American college learners of Western languages, except for Aida's (1994) study with American college learners of Japanese, it is too premature at this point to generalize the results based on the limited studies.

To summarize, the FLCAS could be used solely for the purpose of identifying the anxious students and measuring the severity of foreign language anxiety in the FL classroom in an efficient and appropriate way. This seems to be particularly so, given that no alternative measures of FL anxiety are currently available. However, as discussed above, for the FLCAS to be a standard measure of foreign language anxiety, it leaves much to be desired. First, it is doubtful that the items in the FLCAS are representative of the domain on the construct of foreign language anxiety

containing items of possibly comprehensive coverage of content and relevance. If the items in the FLCAS are not comprehensive enough to be representative of the domain, it goes without saying that the construct validity of the FLCAS remains highly questionable. Second, such a doubt on the FLCAS items for their representativeness of the domain of the construct leads to a debate on issues of construct underrepresentation (Messick, 1989, 1995), situation specificity (MacIntyre & Gardner, 1989), and construct irrelevance (Aida, 1994; MacIntyre & Gardner, 1989; Messick, 1989, 1995). All these issues are subsumed by Messick's unified construct validity and are threats to the construct validity of the FLCAS. More importantly, considering all the points made above regarding issues of construct validity (Messick)will eventually contribute to the generalizability of anxiety score interpretation from the FLCAS test.

A rationale for reconceptualization of foreign language anxiety

Given the limitations of current research on foreign language anxiety such as inconsistent research findings, unsound conceptualization of the construct, cognition-based research, and available instruments, I will attempt to respond to the state of the art issues in FL anxiety research by offering a conceptual framework of FL anxiety, followed by describing a research plan to develop an alternative instrument which derives from the conceptualization. To be exact, the current attempt should be viewed as a first answer to the emerging call for a reconceptualization of the FL anxiety construct and its measure. Horwitz et al. (1986) filled the gap in their recognition of the fact that "research has neither adequately defined foreign language anxiety nor described its specific effects on foreign language learning" (p. 125). Such an initial call made by Horwitz et al. resulted in the identification of FL anxiety as a construct distinct and unique to a classroom language learning situation and the development of the FLCAS, leading to numerous research with the use of their conception and instrument in the meantime. Yet, another gap surfaces between conceptualization and measurement of FL anxiety, as already noted in the previous sections.

A dominant trend in FL anxiety research has focused on the methodology of FL anxiety treatment. As a result, remarkable advances have been made in the methods for the remediation of

FL anxiety. As Neer (1987) observed that theoretical research on anxiety often seems to pose more difficulties than the development of effective remedial methods for anxiety, very few researchers on FL anxiety have, thus far, engaged themselves in the discourse about the concept of the FL anxiety construct and its measurement since Horwitz et al. (1986). Such a research tradition found in unequal attention to a theoretical approach to FL anxiety may reflect two different perspectives among researchers: (a) researchers, in the face of the pressing need of FL teachers to deal with their anxious students, lean toward developing treatment effective for reducing FL anxiety, though they recognize the need for a reconceptualization of the FL anxiety construct and a more sensitive instrument to tap FL anxiety in classroom settings; (b) researchers focus on treatment of FL anxiety without even bothering to recognize the needs at all. Here, it may be that as long as this research trend continues, any hope of capturing a clear picture of the FL anxiety construct will be remote. Rather I find it more useful and constructive to parallel improving treatment with theorizing on FL anxiety in the research tradition. Equal attention given to FL anxiety research both theoretical and practical will eventually pave the way for a thorough understanding of the construct impacting on learner performance. In this vein, the current call turns out to be a valid approach to FL anxiety that necessitates bridging the gap by addressing the two closely related issues of conceptual framework and measure of the construct.

Conceptual framework of foreign language anxiety

Before I table my conception of FL anxiety in a sentence in the form of an operational definition, I must say that the conceptual framework I offer here is preliminary. I must also add that the following questions have served as a guide for my conceptualization of the FL anxiety construct:

(a) What typifies the FL classroom?

(b) What is expected of the FL learners in the classroom?

(c) What kinds of classroom activities are employed for FL learning?

(d) What kinds of activities or language tasks provoke anxious feelings on

the part of an individual FL learner?

(e) If the individual FL learners develop anxiety in the classroom, can we explain the learner's anxious behavior in terms of cognition only or emotion only or others if any?

(f) What kinds of ecological factors affect FL learners' level of anxiety?

(h) To what extent do cultural differences affect learner performance?

(g) Which theory would possibly offer itself a most useful framework associated with conceptualizing the FL anxiety construct?

Considering all these questions from various angles, I tentatively offer the following conceptual framework of the FL anxiety construct:

Foreign language anxiety is a complex of self-perceptions, subjective beliefs, and uneasy feelings that accompanies adverse emotional reactions and cognitive interference characteristic of maladjustment at intrapersonal and interpersonal levels, which arises from the sense that one cannot have control over the unique situation where formal language learning takes place, or where the current proficiency level cannot meet one's expectation and perceived environmental demands.

The above conceptual framework formulated in the form of an operational definition is not the ultimate one.[19] The framework allows for deducing several important aspects of FL anxiety which are empirically testable. This framework emphasizes classroom activities which FL learners possibly come to perform in the language learning contexts. Classroom activities in FL learning process are all goal-directed activities toward a successful mastery of a target language. Thus, all different kinds of activities or task performances are considered central to both the FL learning process and our understanding of what FL classes look like. Among FL task performances, speaking and listening have been reported to be the major sources of classroom anxiety (Horwitz et al., 1986). Extensive research on the FL anxiety has been devoted to speaking skill (Aida, 1994; Horwitz et al., 1986; Kim, 1998; Phillips, 1992; Young, 1986). This reflects that the foremost aim of

learning a foreign language has been to develop oral proficiency. Other FL skills, such as reading and writing, have been barely touched in terms of difficulties which some FL learners associate with their anxious feelings within the classroom settings. Given that reading and writing are also important aspects of FL learning, due attention needs to be paid to these skill areas and the related activities in terms of the effects of FL anxiety on reading and writing performance.

When learners are confronted with difficulties during the course of goal-oriented FL classroom activities, some learners fail to exercise control over themselves, language tasks, and classroom environment. Thus, the failure to control these assumes a crucial role in a learner's developing anxious feelings which function as a negative affect in the FL learning process (McCafferty, 1994).

However, to speak of the issue of control over a FL language learning situation most likely led to cognitivists' approach to learning with focus on logical reasoning process and to attributing learning difficulties to a cognitive deficit in a learner. Such a research tradition has underemphasized the important role that emotion plays in learning by viewing anxiety as a by-product of cognitive interference. The objection to seeing cognition as pivotal to learning has been questioned by recent advances in brain science (LeDoux, 1996; Zajonc, 1984). Rather than being trapped in a debate over the primacy of emotion or cognition, I find it more useful to accommodate both positions in an account of the effects of FL anxiety on the language learning process. The perspective of emotion-cognition interactions may be a viable approach to FL anxiety as an individual difference variable in learning. Such a perspective is congruent with recent research on thinking and feeling based on Vygotsky's theory (Ratner & Stettner, 1991).

An interactionist's approach to the effects of FL anxiety on learning will provide anxiety researchers with a framework to investigate the effects of FL anxiety on learner performance from an ecologically valid perspective. Ultimately the interactionist's position renders itself a useful perspective on which researchers may capture a better picture of FL anxiety seen as the disparity that exists between the self-perceived situational demands on FL learning and one' own capacity to

cope with these demands on a cognitive level (Boekaerts, 1987).

In formulating the conceptual framework of FL anxiety in terms of an interaction between emotion and cognition, activity theory (Wertsch, 1981, 1998) has proven to be a useful theoretical framework which supports an interactionist's approach to FL anxiety. Among a variety of characteristics of the theory, activity is conceptualized as goal-directed action within the context of social interactions. Such a goal-directed action is called 'mediated action' which is a unit of analysis. In this theory, emotions are viewed as being in an inextricable relationship with goal-directed action which interacts with the social environment. An agent's mental functioning is regarded as an interaction of feelings and thoughts, i.e., emotion-cognition interaction (Ratner & Stettner, 1991). Basically, activity theory attaches an importance to social environmental factors in its approach to the human mind as action in order to overcome limitations found in the individualistic reductionism rooted in cognitive science (Wertsch, 1998).

Future Research Areas

The examination of the research studies above leads to the following future research areas coupled with investigating the effects of foreign language anxiety on performance. First, since most of the research studies have been conducted without adequately defining the FL anxiety construct, many inconsistencies were reported on the effects of FL anxiety on learner performance. Therefore, research on the conceptualization of the construct is definitely required to get a clear picture of how this affective variable impacts an FL student's learning process. Based on a sound conceptual framework of the construct and its measure, it will be possible to build a model of FL anxiety. Second, depending on the research results, test anxiety has been shown to be in a negative or positive relationship with language performance. Some researchers have seen test anxiety as a type of state anxiety, while others have regarded it as situation specific anxiety. Thus, more research studies to investigate the role of test anxiety in FL learning are needed. Third, based on the distinction between debilitating anxiety and facilitating anxiety, it may be useful to investigate the optimal level of FL anxiety which maximizes a learner's performance. Fourth, research on the

relationship between FL anxiety and gender difference also deserves attention from a larger population, as noted in Aida (1994). Fifth, some sources of FL anxiety may be related to instructional and cultural factors. Research of these factors will provide a valuable insight into the nature of FL anxiety in the classroom settings. In particular, information on the cultural factors influencing FL learning will be available, using an in-depth qualitative research method. Sixth, research on FL anxiety across FL languages will be necessary to see if the results found are generalizable. Finally, most of the anxiety studies have focused on beginning FL learners at university levels. More studies need to be conducted using different levels of university FL learners and FL learners at the high school level.

Notes

[1]LeDoux (1996) succinctly captures the interrelatedness of mind and emotion as follows: "Minds without emotions are not really minds at all. They are souls on ice-cold, lifeless creatures devoid of any desires, fears, sorrows, pain or pleasure" (p. 25). Interested readers are referred to LeDoux (1996) and Young (1999) for details.

[2]In their research on language-learning strategy use pertinent to the third question, Nyikos and Oxford (1993) state that from the perspectives of information-processing theory and social psychology, "the strategies learners choose and apply to foreign or second language learning depends on the interaction of situational variables with a host of learner variables" (p. 12). For learner variables, see cited references.

[3]Zajonc (1984) showed that emotion has primacy over cognition.

[4]In the strict sense of the meaning, Gardner himself has not integrated the construct of language anxiety into his socio-educational model of second language learning. For a detailed discussion of Gardner's model pertaining to language anxiety, see the subsequent section.

[5]A view on the issue coupled with the operational definition of the construct is found in Young (1991): "In essence, most of this research did not adequately define anxiety . . ." (p. 427). In 1989, MacIntyre and Gardner expressed a concern with the measure of anxiety that "the inconsistencies of past work . . . likely attributable to an inappropriate level of instrument specificity" (p. 23). Here, the issue of "an inappropriate level of specificity" implies either an overspecification or underspecification of the situation/context in the measure of the construct. For more information on the issue of the specificity of the measure, see the discussion of construct underrepresentation in Horwitz et al's measure of FL anxiety.

[6]Conversely, it may be possible that highly anxious students in other content courses do not feel anxious about language learning. Horwitz et al. (1986), however, report that 38% of subjects

endorsed the item in the Foreign Language Classroom Anxiety Scale (FLCAS), "I feel more tense and nervous in my language class than in my other classes." Additionally, Campbell and Ortiz (1991) estimate that on the basis of their previous study (1988) and Horwitz et al., as many as 50% of post-secondary students in their foreign language classes develop debilitating anxiety which impedes successful learning.

[7]MacIntyre and Gardner (1988) suggest that general anxiety is distinguishable from FL anxiety on the basis of the orthogonal factors generated in the analysis of a variety of anxiety scales. They report on the weak relationship between general anxiety and second language proficiency.

[8]A tremendous volume of research literature on FL anxiety in the 1990s reflects the situation specific perspective. This may indicate that language anxiety researchers have begun to recognize the advantages of a situation specific approach over the other ones.

[9]Another perspective on anxiety was cited by Scovel (1978). This perspective was based on the distinction between facilitating and debilitating anxiety made in Alpert and Haber (1960). This distinction adds another important insight to an understanding of anxiety, according to Scovel (1978) and Brown (1994). For details, see Alpert and Haber (1960).

[10]Young (1991) and Phillips (1992) compiled an extensive list of anxiety research in association with language learning from the existing perspectives on anxiety. In most cases, their classifications of research based on anxiety types are consistent. Major differences between these two researchers are found in the interpretation of anxiety types of research, based on the perspectives of state and situation specific anxiety. More specifically, Phillips rigorously follows trait, state, and situation specific perspectives on anxiety, while Young classifies anxiety perspectives in rather a loose way: trait anxiety; state anxiety; test anxiety; FL test anxiety; classroom anxiety; FL classroom anxiety; facilitating and debilitating anxiety. For example, Young distinguishes test anxiety from state anxiety or from situation specific anxiety, but Phillips regards test anxiety as a

type of state anxiety. Another difference concerns the research by Westcott (1973) which Phillips construes as a trait approach to language anxiety, but which Young sees as a state approach. I regard the conflicting interpretations or classifications as being partly attributable to the lack of clarity of the conceptual framework and the looseness of the operational definition of the construct of FL anxiety, as stated earlier.

[11]A sample item from the facilitating anxiety scale is: "Nervousness while using English helps me do better."

[12]Phillips' study supported Gardner, Smythe, Clément, and Gliksman's (1976) and Horwitz et al.'s (1986) studies. The studies by Gardner et al. and Horwitz et al. reveal that language anxiety is negatively related to language performance.

[13]The assessment of Horwitz et al.'s FLCAS will be made in a separate section later.

[14]In a foreword for a book, Language anxiety: From theory and research to classroom application, edited by Horwitz and Young (1991), Gardner expressed his view on the concept of language anxiety as follows: "I must admit that I have had difficulty with the concept of language anxiety, not only . . . because I have had problems integrating it into a model of language learning process. For years, my colleagues and I have included measures of language anxiety and language use anxiety in many of our studies, but language anxiety has never really been integrated into our socio-educational model of second language acquisition" (p. vii).

[15]The criticism here and below is not meant to undermine Gardner's and his associates' major contributions to language learning literature which resulted from their focus on motivation and other attitudinal/personality variables which supposedly interact to influence an individual's language learning within the socio-educational model. The current criticism should be viewed as a contribution to the model which is not final, as admitted by Gardner (1985, 1988).

[16]This problem was also raised in research studies on motivation construct (Clément et al.,

1994; Dörnyei, 1990, 1994a; Oxford & Shearin, 1994).

[17]Gardner distinguishes his own model from the Clément model (1980) and calls Clément's model the 'social context model.' Clément uses the term, 'second language use anxiety' rather than 'language anxiety'. His second language use anxiety is included under the concept of self-confidence which also subsumes the learner's self-evaluations of L2 proficiency.

[18]In their response to the criticism on the measurement of the variables (Oller & Perkins, 1978; Oller, 1982) and the validity of the socio-educational model (Au, 1988), Gardner and MacIntyre (1993) tested the validity of the AMTB, including situational anxiety. Unlike Gardner (1985), the 10-item FCA was used with 5 items added to the 1985 version of the scale. However, even the 10-item measure of the FCA is not found to make a great difference to the issue of construct underrepresentation. See below for more details on the measure of a construct in the discussion of Horwitz et al.'s Foreign Language Classroom Anxiety Scale (FLCAS) within the validity framework.

[19]This is a preliminary conceptualization as I perceive the construct of FL anxiety to be. This framework is based on the literature review and interviews with FL instructors. In the formulation of the current conceptual framework, I am especially indebted to Larry Mikulecky for his willingness to share his insights into the construct of FL anxiety with me on many occasions. However, any fallacy that may be implicated here is all mine.

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